Armyworms in Small Grains - 2018

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Armyworm populations are present in several locations around Minnesota. While currently located in hotspots and not widespread, there have been several locations that required insecticide treatment.

Armyworms do not overwinter here in Minnesota, our populations arise from adults blown in on southerly storm fronts in late spring and early summer. There have been several flights of armyworm moths recorded in MN light traps this summer. Preferred sites for egg laying include lodged areas of grasses, small grains and portions of other fields with high densities of grassy weeds, especially foxtail.

Armyworm caterpillars range from tan and olive to nearly black. Regardless of color, they can be distinguished by a series of lengthwise stripes on the body. Two pale orange to pink stripes with white borders separated by a dark stripe on the side of the body are diagnostic. Mature armyworms are approximately 1 ½ long.

Armyworms, like some cutworms, tend to feed at night and hide throughout the day. Larger larvae consume more food; therefore, infestations often go unnoticed until the larvae are nearly fully grown. Larvae feed in the area they hatch until they pupate in the soil or run out of food. In the latter case, they will migrate in groups. These migrating swarms or “armies” eat and destroy crops as they move. Outbreaks tend to occur when moist, lush vegetation is available.

Preliminary scouting for armyworms in small grains can be done with a sweep net. If larvae are easily found with a sweep net, or if feeding damage is found in the foliage and no other responsible insect pests can be found, shake plants vigorously and examine the ground beneath. Small fecal pellets are sign that

armyworm have been and may still be present. Count the number of larvae on the ground in a square foot area. Pay close attention to areas that are lodged or weedy. Check under debris and soil clods. Do this in at least 5 locations within the field. The treatment threshold for armyworm larvae in small grain is 4-5 per square foot. Populations are often highest on field edges. Don't make an insecticide decision for a field based solely on samples at the edge.

Grassy weeds in or at the edge of fields and late-killed rye cover crops are both attractive egg laying locations for the female moths. Consequently, corn and sweetcorn fields with grassy weeds or that had rye cover crops should also be scouted. Armyworms feeding on corn are often found in the whorl and feeding and larvae are usually easy to see. Treat whorl stage corn when there are 2 larvae/plant on 25% of plants, or when 75% of plants have at least 1 larva. If corn is tasseling, minimize defoliation at/above the ear leaf.

The past few week's storms throughout the region and their associated wind events can easily move armyworm adults. They've also caused a significant amount of lodged grain in most production areas in MN and ND. Light trap recoveries earlier this season indicated flights of armyworm adults have occurred.

All in all, growing populations of armyworms in certain areas isn't really surprising.

So, if you haven't already started, we strongly advise scouting for armyworm in small grain fields! Given the maturity of most grain in the region; Pre-Harvest Interval is going to be a major consideration in selecting an insecticide if treatable populations are found (see the table below for some options).

Some insecticide options for armyworms in small grains with PHI less than 30 days:

Compound	**Rate**	**PHI for grain**
Malathion 5	1-2 pts/ac	7 days
Fastac ES/EC	1.3-3.8 fl oz/ac	14 days
Prevathon	14-20 fl oz/ac	14 days
Mustang Maxx	.128-4 fl.oz./ac	14 days
Blackhawk Entrust Spintor 2SC Tracer Radiant SC	1.1-3.3 fl oz/ac 0.5-2.0 fl oz/ac 2-6 fl oz/ac 1-3 fl oz/ac 2-6 fl oz/ac	21 days
Lorsban Advanced (& other Chlorpyrifos products) Cobalt Advanced Stallion	0.5-1 pt/ac 6-25 fl oz/ac 3.75-11.75 fl oz/ac	28 days

This list is not comprehensive and inclusion or exclusion does not represent a product recommendation or lack thereof by the University of Minnesota.